

PRELIMINARY Analytical Data
Upper Animas River

Analyte	CAS.NO	Units	Location	32nd St Bridge	32nd St Bridge	32nd St Bridge	A68	A68	A68	A68	A72
			Sample ID	085M-1491	085M-1492	085M-1490	085M-1497	085M-1499	085M-1500	085M-1498	085M-1483
			Date	8/5/2015	8/6/2015	8/6/2015	8/5/2015	8/5/2015	8/5/2015	8/6/2015	8/5/2015
			Sample Time	20:50	0:40	9:45	16:00	19:15	23:30	6:15	13:45
			Latitude	37.299991	37.299991	37.299991	37.81120198	37.81120198	37.81120198	37.81120198	37.79027049
			Longitude	-107.868199	-107.868199	-107.868199	-107.6591665	-107.6591665	-107.6591665	-107.6591665	-107.6675778

DM-Hardness - Calculated

Hardness	NA	mg/l	--	158	159	160	101	103	102	103	172
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ICPOE/ICPMS Diss. Metals

Aluminum	7429-90-5	ug/L	--	< 20 U	< 20 U	< 20 U	55.1	45.6 J	31 J	30.5 J	513
Antimony	7440-36-0	ug/L	--	< 0.5 U							
Arsenic	7440-38-2	ug/L	--	0.628 J	0.603 J	< 0.5 U					
Barium	7440-39-3	ug/L	--	48.2	49.3	45.7	21.3	21.9	22.5	21.8	20.2
Beryllium	7440-41-7	ug/L	--	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Cadmium	7440-43-9	ug/L	--	0.178 J	0.16 J	0.19 J	0.828	0.815	0.974	0.85	1.81
Calcium	7440-70-2	ug/L	--	51200	51400	52200	36400	37200	36700	36900	61300
Chromium	7440-47-3	ug/L	--	3.06	3	2.47	1.08 J	< 1 U	1.23 J	< 1 U	< 1 U
Cobalt	7440-48-4	ug/L	--	0.321	0.332	0.307	0.34	0.371	0.375	0.405	5.75
Copper	7440-50-8	ug/L	--	1.7	1.56	1.62	3.45	3.16	3.52	3.26	9.27
Iron	7439-89-6	ug/L	--	< 100 U							
Lead	7439-92-1	ug/L	--	0.24	< 0.1 U	0.115 J	0.232	0.283	0.82	0.329	0.225
Magnesium	7439-95-4	ug/L	--	7280	7350	7120	2580	2560	2580	2610	4590
Manganese	7439-96-5	ug/L	--	105	105	97.8	737	727	757	817	1370
Molybdenum	7439-98-7	ug/L	--	< 1 U	< 1 U	< 1 U	1.51	1.44	1.48	1.4	< 1 U
Nickel	7440-02-0	ug/L	--	< 0.5 U	2.87						
Potassium	7440-09-7	ug/L	--	1960	2020	1890	535 J	530 J	515 J	514 J	691 J
Selenium	7782-49-2	ug/L	--	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Silver	7440-22-4	ug/L	--	< 0.5 U							
Sodium	7440-23-5	ug/L	--	11400	11600	11000	1750	1720	1740	1720	2400
Thallium	7440-28-0	ug/L	--	< 0.5 U							
Vanadium	7440-62-2	ug/L	--	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Zinc	7440-66-6	ug/L	--	43.5	37.8	49.1	199	238	324	326	699

PRELIMINARY Analytical Data
Upper Animas River

Analyte	CAS.NO	Units	Location	32nd St Bridge	32nd St Bridge	32nd St Bridge	A68	A68	A68	A68	A72
			Sample ID	085M-1491	085M-1492	085M-1490	085M-1497	085M-1499	085M-1500	085M-1498	085M-1483
			Date	8/5/2015	8/6/2015	8/6/2015	8/5/2015	8/5/2015	8/5/2015	8/6/2015	8/5/2015
			Sample Time	20:50	0:40	9:45	16:00	19:15	23:30	6:15	13:45
			Latitude	37.299991	37.299991	37.299991	37.81120198	37.81120198	37.81120198	37.81120198	37.79027049
ICPOE/ICPMS Tot. Rec. Metals											
Aluminum	7429-90-5	ug/L	--	176	171	220	111	103	88.3	90.9	5970
Antimony	7440-36-0	ug/L	--	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	6.17 D
Arsenic	7440-38-2	ug/L	--	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	28.9 D
Barium	7440-39-3	ug/L	--	49.9 JD	48.8 JD	46.8 JD	< 25 U	< 25 U	< 25 U	< 25 U	168 D
Beryllium	7440-41-7	ug/L	--	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Cadmium	7440-43-9	ug/L	--	< 0.5 U	< 0.5 U	< 0.5 U	0.724 JD	0.652 JD	0.717 JD	0.703 JD	2.27 D
Calcium	7440-70-2	ug/L	--	52000	52200	51600	37600	37700	38500	38300	61700
Chromium	7440-47-3	ug/L	--	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Cobalt	7440-48-4	ug/L	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	7.04 D
Copper	7440-50-8	ug/L	--	2.7 JD	< 2.5 U	3.31 JD	6.15 D	4.14 JD	4.89 JD	4.63 JD	49.3 D
Iron	7439-89-6	ug/L	--	331	295	371	165 J	132 J	138 J	143 J	66300
Lead	7439-92-1	ug/L	--	2.56 D	1.8 D	3.46 JD	1.77 D	1.54 D	2.18 D	1.55 D	214 D
Magnesium	7439-95-4	ug/L	--	7140	7160	7050	2560	2540	2590	2590	5600
Manganese	7439-96-5	ug/L	--	118	113	120	729	711	750	793	1480
Molybdenum	7439-98-7	ug/L	--	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Nickel	7440-02-0	ug/L	--	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	4.33 JD
Potassium	7440-09-7	ug/L	--	2050	2110	2050	636 J	644 J	616 J	578 J	2380
Selenium	7782-49-2	ug/L	--	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Silver	7440-22-4	ug/L	--	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
Sodium	7440-23-5	ug/L	--	11100	11300	10900	1680	1710	1710	1690	2470
Thallium	7440-28-0	ug/L	--	12 D	13.2 D	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
Vanadium	7440-62-2	ug/L	--	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	18.3 D
Zinc	7440-66-6	ug/L	--	71.9	67.7	79.8	222	248	316	321	731
TM_Mercury 245.1											
Mercury	7439-97-6	ug/L	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U

J Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)

MDL Method Detection Limit

PQL Practical Quantitation Limit, also known as reporting limit.

U Analyte not detected at or above MDL qualifier

D Diluted value qualifier.

mg/L Parts per million (milligrams per liter). Solids equivalent = mg/Kg.

ug/L Parts per billion (micrograms per liter). Solids equivalent = ug/Kg

PRELIMINARY Analytical Data
Upper Animas River

Analyte	CAS.NO	Units	Location	A72	A72	A72	A72	Bakers Bridge	Bakers Bridge	Bakers Bridge	CC48
			Sample ID	085M-1482	085M-1485	085M-1486	085M-1484	085M-1495	085M-1493	085M-1494	085M-1489
			Date	8/5/2015	8/5/2015	8/5/2015	8/6/2015	8/5/2015	8/6/2015	8/6/2015	8/5/2015
			Sample Time	16:15	20:10	23:50	6:30	20:05	0:00	9:00	19:25
			Latitude	37.79027049	37.79027049	37.79027049	37.79027049	-37.454134	-37.454134	-37.454134	37.82
			Longitude	-107.6675778	-107.6675778	-107.6675778	-107.6675778	-107.801601	-107.801601	-107.801601	-107.6631
DM-Hardness - Calculated											
Hardness	NA	mg/l	--	271	158	144	143	98	98	138	537
ICPOE/ICPMS Diss. Metals											
Aluminum	7429-90-5	ug/L	--	12000	1370	59.1	< 20 U	52.3	43.9 J	904	23900
Antimony	7440-36-0	ug/L	--	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U				
Arsenic	7440-38-2	ug/L	--	0.797 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U
Barium	7440-39-3	ug/L	--	22.6	21.6	20.8	21.5	29.8	29.9	30.3	25.7 JD
Beryllium	7440-41-7	ug/L	--	4.5 J	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	9.29
Cadmium	7440-43-9	ug/L	--	15.2	4.29	2.59	2.11	0.353	0.336	5.32	30.6 D
Calcium	7440-70-2	ug/L	--	95400	55700	51000	50700	32600	32600	46500	190000
Chromium	7440-47-3	ug/L	--	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U
Cobalt	7440-48-4	ug/L	--	32.1	7.98	5.4	4.69	1.02	1.08	9.32	54.4 D
Copper	7440-50-8	ug/L	--	1410	205	11.4	7.63	2.28	1.88	189	2260 D
Iron	7439-89-6	ug/L	--	5840	3170	2090	1980	< 100 U	< 100 U	189 J	27000
Lead	7439-92-1	ug/L	--	50.7	3.12	0.118 J	< 0.1 U	< 0.1 U	< 0.1 U	1.56	73.9 D
Magnesium	7439-95-4	ug/L	--	8030	4650	4170	4030	3990	3920	5300	15400
Manganese	7439-96-5	ug/L	--	6650	1810	1320	1160	306	296	2090	10900
Molybdenum	7439-98-7	ug/L	--	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U
Nickel	7440-02-0	ug/L	--	13.8	4.04	2.69	2.72	0.646 J	0.788 J	5.39	28.8 D
Potassium	7440-09-7	ug/L	--	1520	721 J	631 J	605 J	631 J	646 J	912 J	2160
Selenium	7782-49-2	ug/L	--	1.14 J	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U
Silver	7440-22-4	ug/L	--	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U				
Sodium	7440-23-5	ug/L	--	2600	2310	2330	2310	1790	1790	1960	3930
Thallium	7440-28-0	ug/L	--	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U				
Vanadium	7440-62-2	ug/L	--	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 10 U
Zinc	7440-66-6	ug/L	--	4020	1210	733	609	85.8	110	1700	8540

PRELIMINARY Analytical Data
Upper Animas River

Analyte	CAS.NO	Units	Location	A72	A72	A72	A72	Bakers Bridge	Bakers Bridge	Bakers Bridge	CC48
			Sample ID	085M-1482	085M-1485	085M-1486	085M-1484	085M-1495	085M-1493	085M-1494	085M-1489
			Date	8/5/2015	8/5/2015	8/5/2015	8/6/2015	8/5/2015	8/6/2015	8/6/2015	8/5/2015
			Sample Time	16:15	20:10	23:50	6:30	20:05	0:00	9:00	19:25
			Latitude	37.79027049	37.79027049	37.79027049	37.79027049	-37.454134	-37.454134	-37.454134	37.82
			Longitude	-107.6675778	-107.6675778	-107.6675778	-107.6675778	-107.801601	-107.801601	-107.801601	-107.6631
ICPOE/ICPMS Tot. Rec. Metals											
Aluminum	7429-90-5	ug/L	--	126000 D	12800	4470	2780	363	375	31400	69000 D
Antimony	7440-36-0	ug/L	--	< 50 U	10.2 D	2.66 JD	< 2.5 U	< 2.5 U	< 2.5 U	19.9 JD	35.1 JD
Arsenic	7440-38-2	ug/L	--	1080 D	116 D	27.1 D	15.7 D	< 2.5 U	< 2.5 U	264 D	732 D
Barium	7440-39-3	ug/L	--	1410 D	111 D	47.6 JD	31.2 JD	29.9 JD	30.7 JD	341 D	439 JD
Beryllium	7440-41-7	ug/L	--	18.4 JD	2.06 J	< 2 U	< 2 U	< 2 U	< 2 U	4.73 J	13.1 JD
Cadmium	7440-43-9	ug/L	--	28.3 D	4.69 D	3.23 D	2.34 D	< 0.5 U	< 0.5 U	6.13 D	30.6 D
Calcium	7440-70-2	ug/L	--	98400 D	55100	51100	50300	33000	32400	48500	171000 D
Chromium	7440-47-3	ug/L	--	< 100 U	10.6 D	< 5 U	< 5 U	< 5 U	< 5 U	< 25 U	< 50 U
Cobalt	7440-48-4	ug/L	--	54.1 D	9.51 D	5.92 D	5.24 D	0.975 JD	1.12 D	12.8 D	59.8 D
Copper	7440-50-8	ug/L	--	4820 D	542 D	180 D	113 D	4.03 JD	4.15 JD	1120 D	3620 D
Iron	7439-89-6	ug/L	--	1250000 D	164000	35700	18400	421	412	326000	896000 D
Lead	7439-92-1	ug/L	--	25600 D	1390 D	301 D	88.3 D	3.45 D	1.5 D	5720 D	7530 D
Magnesium	7439-95-4	ug/L	--	41800 D	6490	4640	4120	4110	3920	12100	23400 D
Manganese	7439-96-5	ug/L	--	12200 D	2020	1350	1170	302	295	3040	11900 D
Molybdenum	7439-98-7	ug/L	--	268 D	23.2 D	5.89 D	< 5 U	< 5 U	< 5 U	66.9 D	138 D
Nickel	7440-02-0	ug/L	--	< 50 U	6.61 D	3.75 JD	3.54 JD	< 2.5 U	< 2.5 U	< 12.5 U	36 JD
Potassium	7440-09-7	ug/L	--	28600 D	3030	1480	940 J	751 J	748 J	8400	11300 D
Selenium	7782-49-2	ug/L	--	< 100 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 25 U	< 50 U
Silver	7440-22-4	ug/L	--	149 D	8.25 D	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	37.8 D	45.7 JD
Sodium	7440-23-5	ug/L	--	4750 JD	2460	2310	2250	1870	1820	2710	4450 JD
Thallium	7440-28-0	ug/L	--	< 50 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 12.5 U	< 25 U
Vanadium	7440-62-2	ug/L	--	677 D	80.7 D	18.7 D	12.4 JD	< 10 U	< 10 U	172 D	455 D
Zinc	7440-66-6	ug/L	--	6840 D	1250	806	672	129	137	1860	8060 D
TM_Mercury 245.1											
Mercury	7439-97-6	ug/L	--	0.418	0.065 J	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	0.152	0.078 J

J Data Estimated qualifier (also applied to all data)

MDL Method Detection Limit

PQL Practical Quantitation Limit, also known as report

U Analyte not detected at or above MDL qualifier

D Diluted value qualifier.

mg/L Parts per million (milligrams per liter). Solids equ

ug/L Parts per billion (micrograms per liter). Solids equ

PRELIMINARY Analytical Data
Upper Animas River

Analyte	CAS.NO	Units	Location	CC48	CC48	Cement Creek 14th St Bridge
			Sample ID	085M-1488	085M-1487	085M-1496
			Date	8/5/2015	8/6/2015	8/5/2015
			Sample Time	23:00	6:00	16:00
			Latitude	37.82	37.82	37.8124
			Longitude	-107.6631	-107.6631	-107.661401
DM-Hardness - Calculated						
Hardness	NA	mg/l	--	467	433	1300
ICPOE/ICPMS Diss. Metals						
Aluminum	7429-90-5	ug/L	--	14400	10100	91900
Antimony	7440-36-0	ug/L	--	< 2.5 U	< 2.5 U	< 5 U
Arsenic	7440-38-2	ug/L	--	< 2.5 U	< 2.5 U	< 5 U
Barium	7440-39-3	ug/L	--	< 25 U	< 25 U	< 50 U
Beryllium	7440-41-7	ug/L	--	4.31 J	2.65 J	34.8
Cadmium	7440-43-9	ug/L	--	19.1 D	14.2 D	98.3 D
Calcium	7440-70-2	ug/L	--	167000	156000	461000
Chromium	7440-47-3	ug/L	--	< 5 U	< 5 U	< 10 U
Cobalt	7440-48-4	ug/L	--	36.2 D	30.7 D	204 D
Copper	7440-50-8	ug/L	--	1130 D	786 D	10400 D
Iron	7439-89-6	ug/L	--	21300	20000	49500
Lead	7439-92-1	ug/L	--	54.1 D	30 D	150 D
Magnesium	7439-95-4	ug/L	--	12300	10900	36500
Manganese	7439-96-5	ug/L	--	8020	6720	37100
Molybdenum	7439-98-7	ug/L	--	< 5 U	< 5 U	< 10 U
Nickel	7440-02-0	ug/L	--	18.2 D	15.8 D	91.5 D
Potassium	7440-09-7	ug/L	--	1600	1410	6630
Selenium	7782-49-2	ug/L	--	< 5 U	< 5 U	< 10 U
Silver	7440-22-4	ug/L	--	< 2.5 U	< 2.5 U	< 5 U
Sodium	7440-23-5	ug/L	--	3660	3690	4960
Thallium	7440-28-0	ug/L	--	< 2.5 U	< 2.5 U	< 5 U
Vanadium	7440-62-2	ug/L	--	< 10 U	< 10 U	< 20 U
Zinc	7440-66-6	ug/L	--	5820	4650	26800

PRELIMINARY Analytical Data
Upper Animas River

Analyte	CAS.NO	Units	Location	CC48	CC48	Cement Creek 14th St Bridge
			Sample ID	085M-1488	085M-1487	085M-1496
			Date	8/5/2015	8/6/2015	8/5/2015
			Sample Time	23:00	6:00	16:00
			Latitude	37.82	37.82	37.8124
			Longitude	-107.6631	-107.6631	-107.661401
ICPOE/ICPMS Tot. Rec. Metals						
Aluminum	7429-90-5	ug/L	--	28700 D	16400	945000 D
Antimony	7440-36-0	ug/L	--	14.1 D	6.79 D	321 JD
Arsenic	7440-38-2	ug/L	--	203 D	98.5 D	8230 D
Barium	7440-39-3	ug/L	--	159 D	52.3 D	9730 D
Beryllium	7440-41-7	ug/L	--	< 10 U	3.55 J	135 JD
Cadmium	7440-43-9	ug/L	--	18.5 D	14.5 D	165 D
Calcium	7440-70-2	ug/L	--	154000 D	146000	454000 D
Chromium	7440-47-3	ug/L	--	17.2 JD	6.62 JD	706 JD
Cobalt	7440-48-4	ug/L	--	39.1 D	29.8 D	384 D
Copper	7440-50-8	ug/L	--	1480 D	909 D	36700 D
Iron	7439-89-6	ug/L	--	276000 D	130000	9930000 D
Lead	7439-92-1	ug/L	--	2010 D	536 D	179000 D
Magnesium	7439-95-4	ug/L	--	15000 D	11300	279000 D
Manganese	7439-96-5	ug/L	--	8270 D	6540	78000 D
Molybdenum	7439-98-7	ug/L	--	36.5 D	14.3 D	2010 D
Nickel	7440-02-0	ug/L	--	20.8 D	14.8 D	276 JD
Potassium	7440-09-7	ug/L	--	5220 D	2470	212000 D
Selenium	7782-49-2	ug/L	--	10.1 JD	< 5 U	< 500 U
Silver	7440-22-4	ug/L	--	10.8 D	2.53 JD	1110 D
Sodium	7440-23-5	ug/L	--	3940 JD	3730	23400 JD
Thallium	7440-28-0	ug/L	--	< 5 U	< 2.5 U	< 250 U
Vanadium	7440-62-2	ug/L	--	131 D	67.3 D	5470 D
Zinc	7440-66-6	ug/L	--	5400 D	4160	44000 D
TM_Mercury 245.1						
Mercury	7439-97-6	ug/L	--	0.077 J	0.052 J	19.2 D

J Data Estimated qualifier (also applied to all data)

MDL Method Detection Limit

PQL Practical Quantitation Limit, also known as report

U Analyte not detected at or above MDL qualifier

D Diluted value qualifier.

mg/L Parts per million (milligrams per liter). Solids equ

ug/L Parts per billion (micrograms per liter). Solids equ